

## INTEGRATING ELECTRONIC INFORMATION RESOURCES INTO MARKETING EDUCATION

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### ABSTRACT

The focus of this paper is to examine the importance of teaching students about vital marketing information contained in machine-readable databases produced by the federal government. This paper discusses strategies for exposing students to appropriate databases and instructing them in their use. Library seminars team-taught by a marketing instructor and a librarian are recommended. Descriptions of relevant databases are included.

### THE IMPORTANCE OF DATABASE RESEARCH SKILLS

The ability to do library research is an important survival skill for all college students. Unfortunately, many students often lack the tools for doing business research. Even students who are otherwise good researchers do not have business-oriented library experience. Students usually learn how to use the library in liberal arts courses and do not develop a familiarity with business related reference works, indices, and databases.

The process of planning a research strategy, using appropriate reference sources, identifying indices, and searching relevant databases are essential skills for the marketing student. Of these, computerized databases are relatively recent additions to the collections of most research libraries. Although the technical training needed to effectively use these databases is minimal, business students differ in ability and confidence level. Even today, many students are still anxious and wary about computers. (Wilson and Daubek 1992) Since most students are either unwilling to use databases or are simply unaware of their existence,

it is essential that the use and identification of electronic information resources be integrated into the marketing curriculum.

While instruction on databases seems to bite into an already busy syllabus in a crowded marketing course (McDaniel, Lamb and Jarboe 1989), we argue that teaching these skills adds to both the efficiency and effectiveness of the marketing student. Not only will the student conduct faster and more thorough research, they will also be able to identify a wider range of available materials. All students are well served by learning how to do research. Library research methods are best introduced, at the very latest, at the level of the business survey course. The skills learned in the introductory marketing class are also useful to the students concentrating in other areas of business. Awareness of the availability of information is an important job skill that is often overlooked by marketing educators.

The ability to search computerized databases supports several educational methods. In the classroom, many marketing educators use research projects as learning tools (Henke, Locander, Mentzer, and Nastas 1988; Malhortra, Tashchian, and Jain 1989). Since most demographic and marketing data is now only available in machine-readable format, database use is crucial to the successful execution of marketing students' projects. Learning how to access and interpret secondary data (Burger and Schmidt 1987) is most effectively done using computerized databases. This secondary research provides the basis for conducting situation analysis (McCarthy and Perreault 1990).

Over the past two years, several CD-ROM (Compact Disc - Read Only Memory) databases with important marketing information have been issued by the United States government. The information contained in these databases is in many cases not widely available. While some of the data contained in these new databases is available in paper, it lacks the flexibility and customization capabilities of digitized information. The content and format of the information provided by these databases is vital to conducting comprehensive marketing research.

CD-ROM databases have become the federal government's standard method of distributing large data sets to libraries (Staninger 1991). Each CD-ROM is capable of holding 250,000 pages of single-spaced text, the equivalent of 1,600 floppy discs. New CD-ROM products are regularly introduced, including almost all of the 1990 Census. In addition, almost all business-related indices and abstracts are available in CD-ROM format. Learning to identify and search the appropriate database is a critical factor in conducting market research.

#### **TEACHING DATABASE RESEARCH SKILLS**

CD-ROM databases create serendipitous learning experiences because of their tremendous size and flexibility (Rice 1988). It is virtually impossible to instruct every student on all the capabilities of each database. Even if this were possible, it is very unlikely that they would retain all of the information presented. Instruction in database searching should cover the fundamentals of searching each database presented and also sensitize students to the overall capabilities of each database. It has been the experience of the authors that when students have been taught the fundamentals of searching a particular database and are aware of its special capabilities, they attempt to retrieve progressively more precise data, teaching themselves advanced techniques of database searching in the process.

Collaboration by the instructor and the librarian is an effective means of teaching database searching using the following sequence: lecture, demonstration, and supervised small group hands-on practice. If possible, the search

strategy seminars should take place in the library. Most libraries have a room available for group instruction. Conducting these sessions in the library provides an opportunity to introduce students to the librarian and to point out the location of appropriate databases.

The lecture segment is used by the instructor to introduce a typical strategy for approaching a research project. Concepts such as controlled vocabularies, keywords, subject headings, and Boolean operators (e.g., AND-OR-NOT) are explained and strategies for their use are presented by the librarian. Although there is wide variation in command languages among databases, these concepts are common to all search strategies. During the lecture, marketing-specific databases are introduced and their special capabilities discussed. Real-life examples provided by the instructor help the librarian to illustrate the search capabilities of each database.

The lecture is followed by the demonstration segment. The authors have found the combination of a Liquid Crystal Display (LCD) panel and an overhead projector to be the best method for projecting computer displays onto a large screen. (see APPENDIX 1) If this technology is unavailable, transparencies made from database printouts can be substituted. The librarian then demonstrates the step-by-step methods for conducting a basic search. The librarian moves through the database using the search strategy discussed in the lecture, justifying each direction chosen and announcing each keystroke. Students are encouraged to ask questions throughout the demonstration, with search steps repeated as necessary. At the end of the demonstration, students are asked to suggest topics for searching, and are encouraged to call out the steps to be taken by the librarian demonstrating the database. This is not only encourages active participation by the students, it also allows the instructor and the librarian to gauge the comprehension level of the students. Misunderstood searching techniques and concepts are then reviewed.

Finally, the class is broken into small groups of three or four students for 15-20 minutes of hands-on

practice. Because of time requirements, sign-up sessions outside of class are recommended. In the small group, students should take turns keying in commands, with the instructor or librarian acting as a guide, occasionally offering suggestions and answering questions. Students should be allowed to make mistakes and become "lost" in the database. The group should be encouraged to guide each other through the database as much as possible. The serendipitous learning described above often occurs in these small group sessions. Although the group should be encouraged to learn as much as possible on their own, the presence of the instructor or librarian is important so that the group can avoid unneeded frustrations and failures.

#### **APPROPRIATE CD-ROM DATABASES**

As the trend towards automation of information accelerates, the need to identify and effectively use machine-readable data sources becomes essential. The following are just a few of the reasonably priced CD-ROM databases that have recently become available from the federal government. Be aware that there are also many excellent privately produced CD-ROM databases which cost several thousand dollars for a yearly subscription. The databases listed here are all produced by the federal government, and offer a cost-effective means of providing students with an opportunity to learn database searching. As the trend towards automation of information accelerates, the need to identify and effectively use machine-readable data sources becomes essential.

#### **NATIONAL TRADE DATA BANK (NTDB)**

U.S. Department of Commerce, Economics and Statistics Administration, Office of Business Analysis. \$360 for twelve monthly CDs.  
To order, call (202) 482-1986.

One of the most exciting products ever offered by the federal government is the National Trade Data Bank (NTDB) on CD-ROM. Issued monthly since August of 1990, this data bank includes vital international marketing information that has never been available before. It is the single most comprehensive source of international marketing

information available today. The NTDB provides up-to-date international trade information in a flexible machine-readable format. The entire data bank contains about 100,000 tables, documents, and time series. These are contained in about seventy programs on the disc. Of particular interest to the market researcher is the "Market Research Reports" program. In it, Country Marketing Plans and industry analyses which are prepared by the U.S. Embassies alert the market researcher to current trends in the country's business climate and identify best prospects for trade. Each report is searchable by country, product, keyword, or a combination of the three. Other highlights include the full text of the North American Free Trade Agreement (NAFTA), plus commodity and country specific import/export statistics. Instruction in the content and use of the NTDB is absolutely essential to any international marketing course.

#### **FOREIGN TRADERS INDEX (FTI)**

U.S. Department of Commerce, Economics and Statistics Administration, Office of Business Analysis. Twelve monthly CDs included in the price of the NTDB.

The Foreign Traders Index (FTI) was initially issued as a part of the NTDB. It has grown so large that it is now issued as a separate disc, but it is still included with the NTDB subscription. This is an exceptional value. The FTI is a directory of over 50,000 foreign companies who have expressed an interest in trading with companies in the United States. The database is searchable by country, product, size of company, keyword, harmonized commodity number (commonly known as the "Schedule B" number), or a combination of the above. Each entry gives the company's name, address, phone and FAX numbers, size of company, year established, products handled, and each company's area of business, e.g., distributor, importer, exporter, manufacturer, agent, etc. This is another essential database for the student of international marketing.

#### **NATIONAL ECONOMIC, SOCIAL, AND ENVIRONMENTAL DATA BANK (NESE-DB)**

U.S. Department of Commerce, Economics

and Statistics Administration.  
\$95 per year for four quarterly updates. To order, call (202) 482-1986

Introduced in Fall of 1992, the National Economic, Social, and Environmental Data Bank (NESE-DB) is a domestic companion to the NTDB. Programs of particular interest to the market researcher are the Business Cycle Indicators, Current Business Statistics, State Profiles, and the U.S. Regional Economic Projections to 2040. The NESE-DB currently has fifty-two programs.

**REGIONAL ECONOMIC INFORMATION SYSTEM (REIS)**

U.S. Department of Commerce, Economic and Statistics Administration, Bureau of Economic Analysis, Regional Economic Measurement Division. \$35 for one annual disc.  
To order, call (202) 254-6630

The Regional Economic Information System (REIS) on CD-ROM is one of the many new products in machine-readable format issued by the federal government. Its marketing applications include state, country, and metropolitan area income statistics, as well as important and previously hard to find Journey-to-Work commuting flows from the Bureau of the Census.

**SUMMARY**

Marketing educators need to integrate teaching sessions on the searching of machine-readable databases available in libraries into the curriculum. Students who are taught database searching exhibit increased awareness, efficiency and effectiveness when performing both primary and secondary marketing research. Instruction in database searching also develops an important job skill.

**APPENDIX 1**

The authors use the following computer hardware to demonstrate computer searching in the classroom. Approximate prices for each piece of equipment are included.

Item	Approx. Price
80386 PC Compatible Computer	\$ 1,500
CD-ROM Reader	900
LCD Projection Panel	1,200
Overhead Projector	<u>500</u>
<b>Approx. Total Price</b>	<b>\$ 4,100</b>

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